

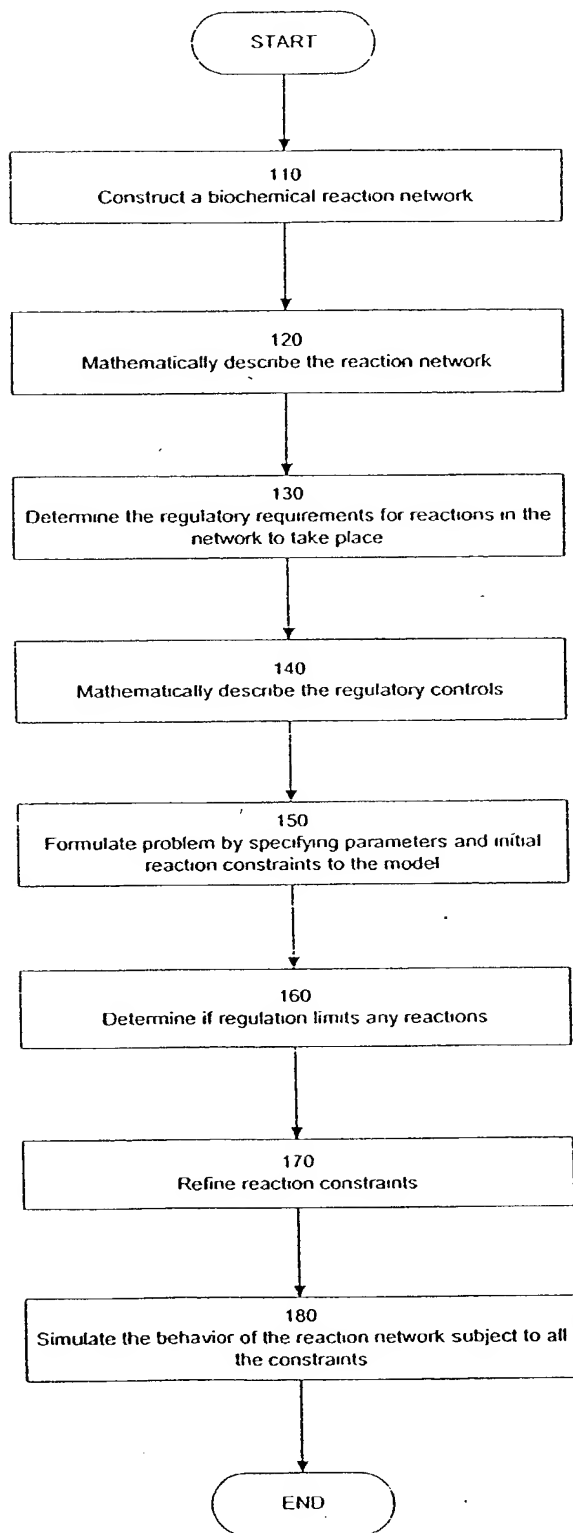
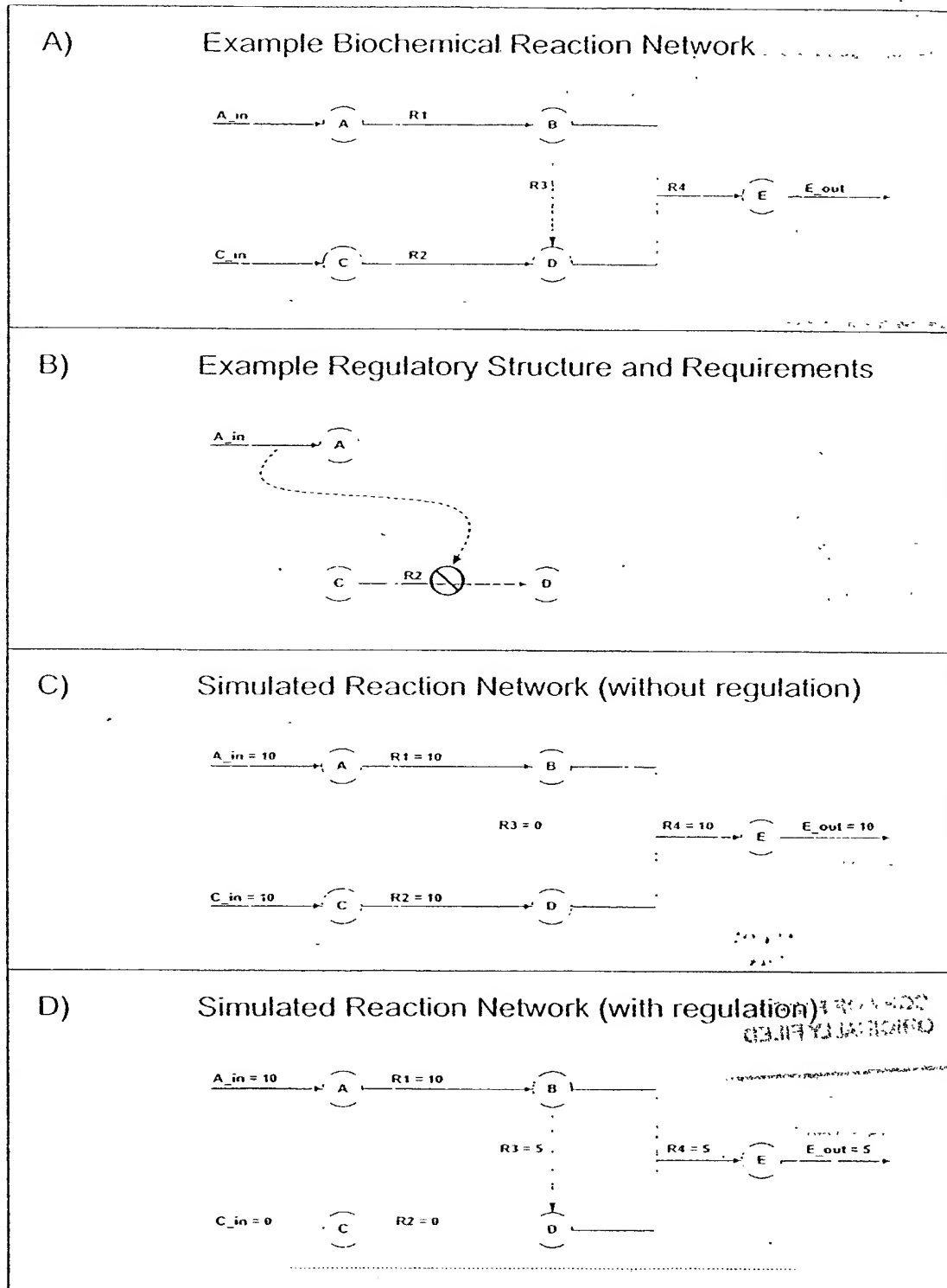
**Figure 1****General Process for Developing and Implementing a Regulated Biochemical Reaction Network Model**

Figure 2



### Metabolic Model

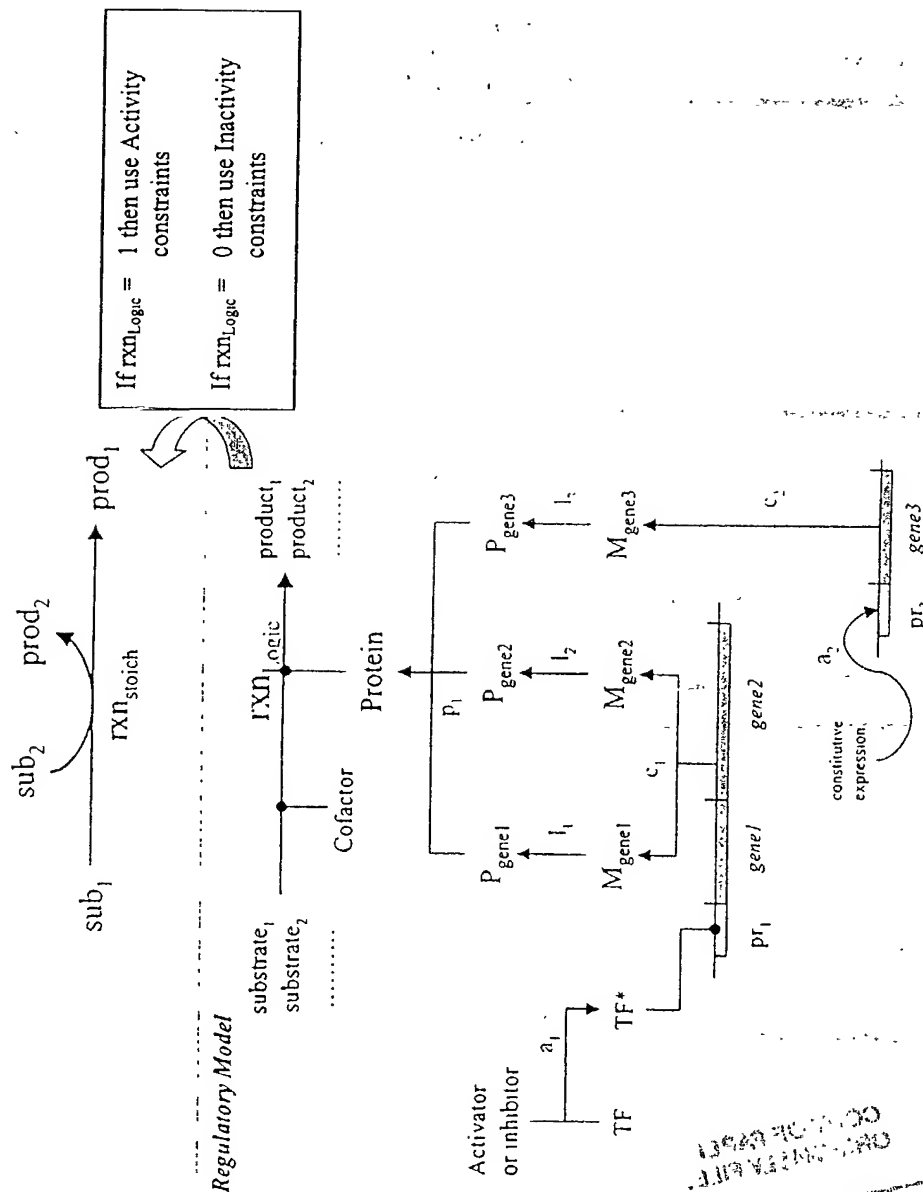
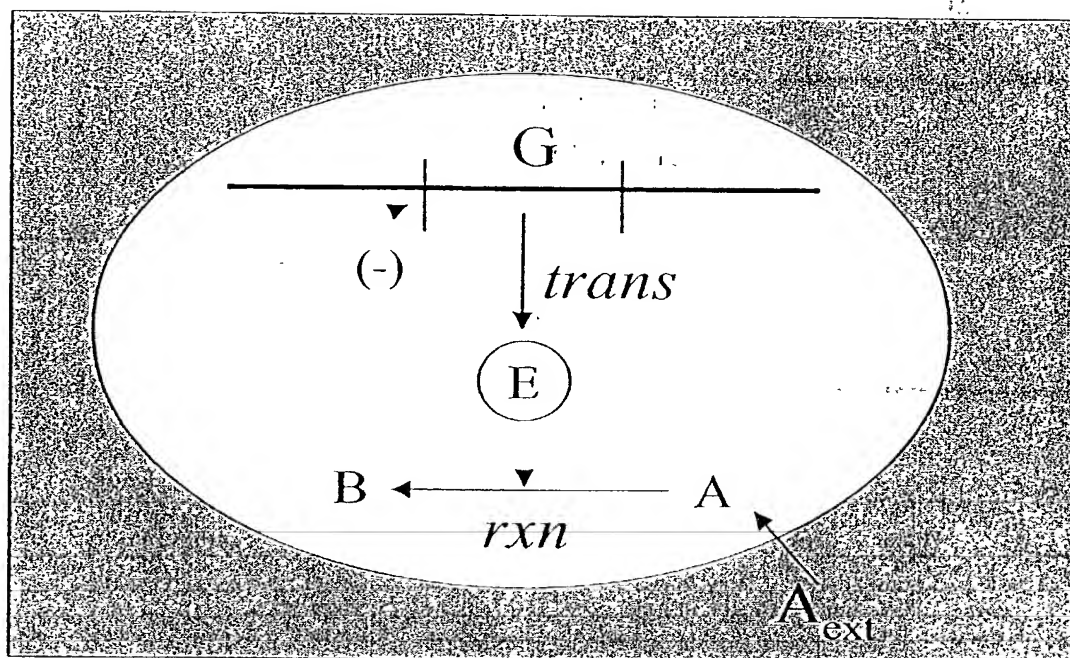
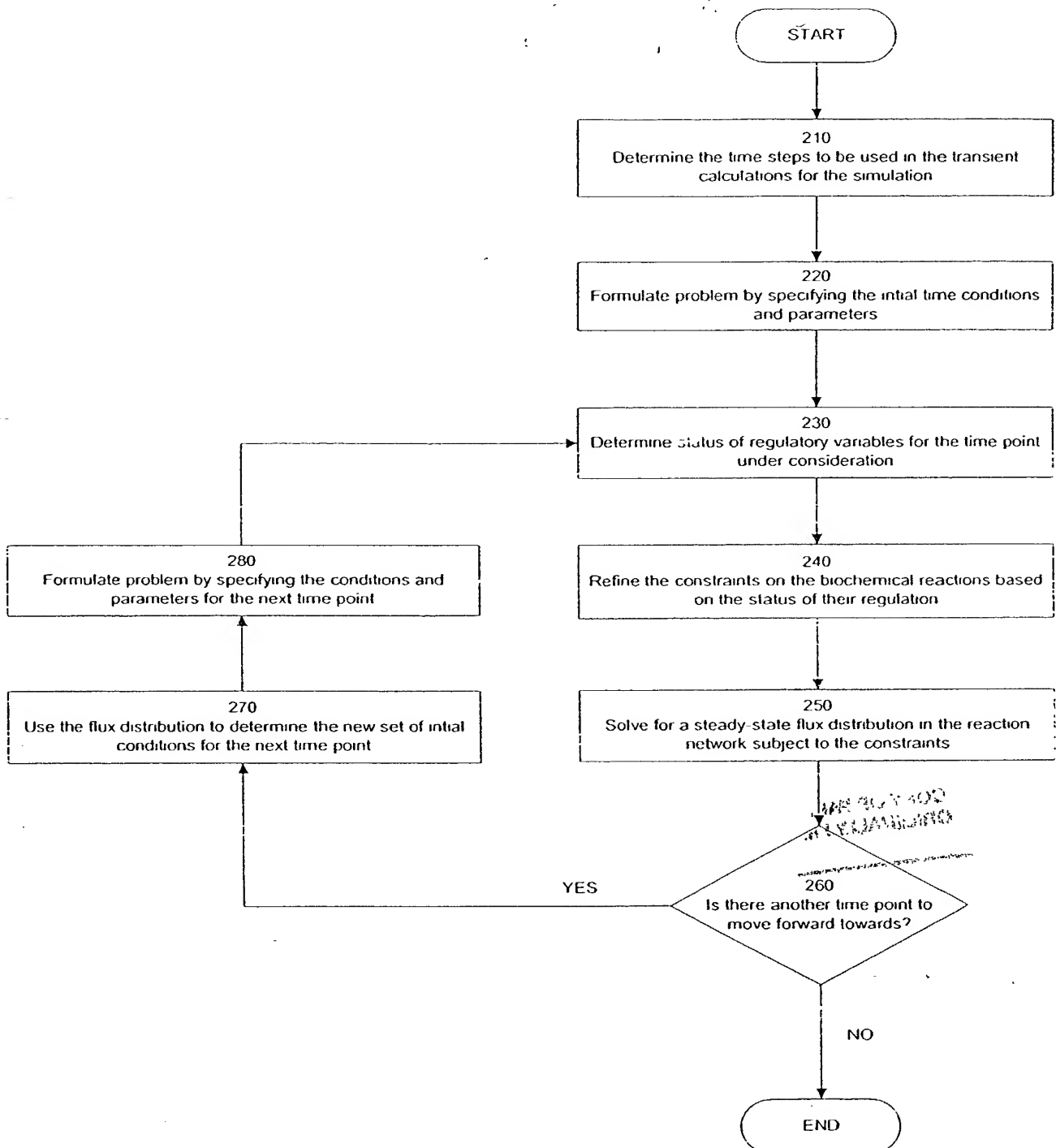


Figure 4

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**Figure 5****A Time-Dependent Implementation of a Regulated Biochemical Reaction Network Model**

**Figure 6**

**Process for Developing Genome Scale Regulated Models of Metabolism**

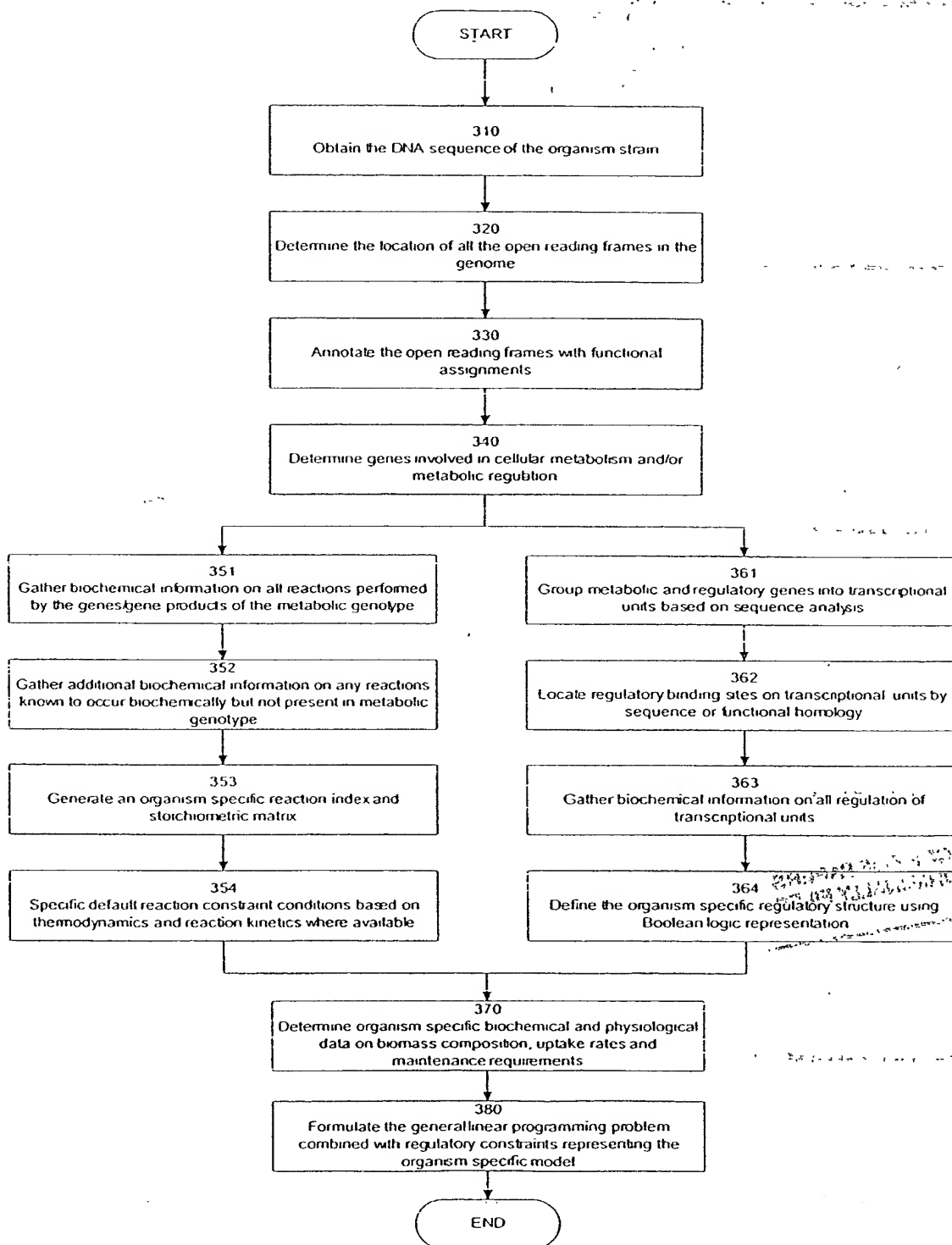
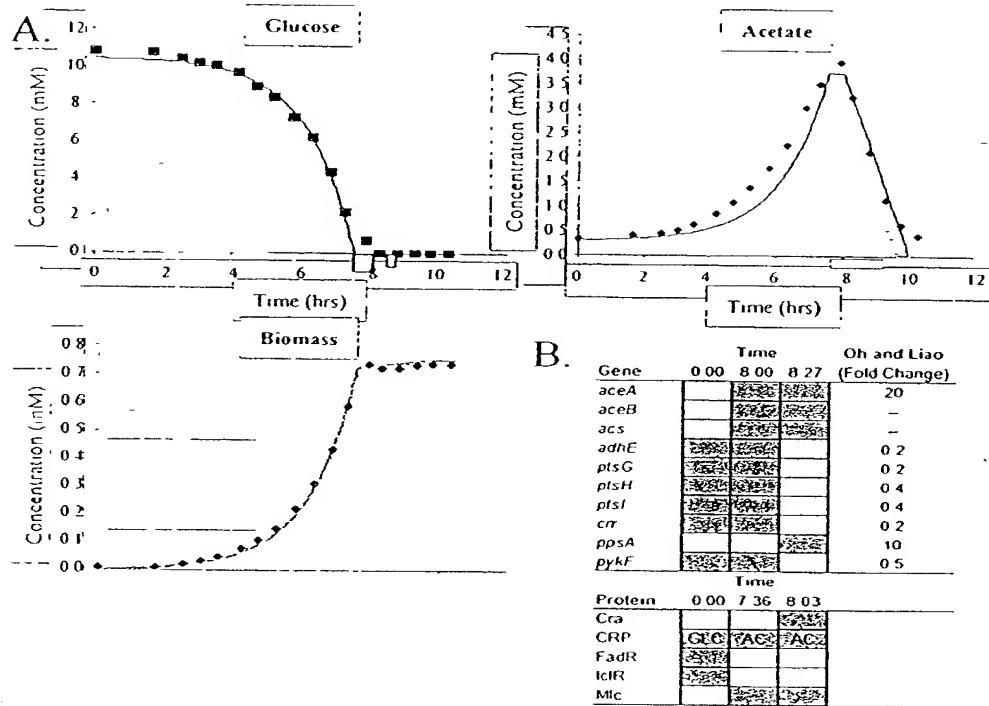




Figure 8



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Figure 9

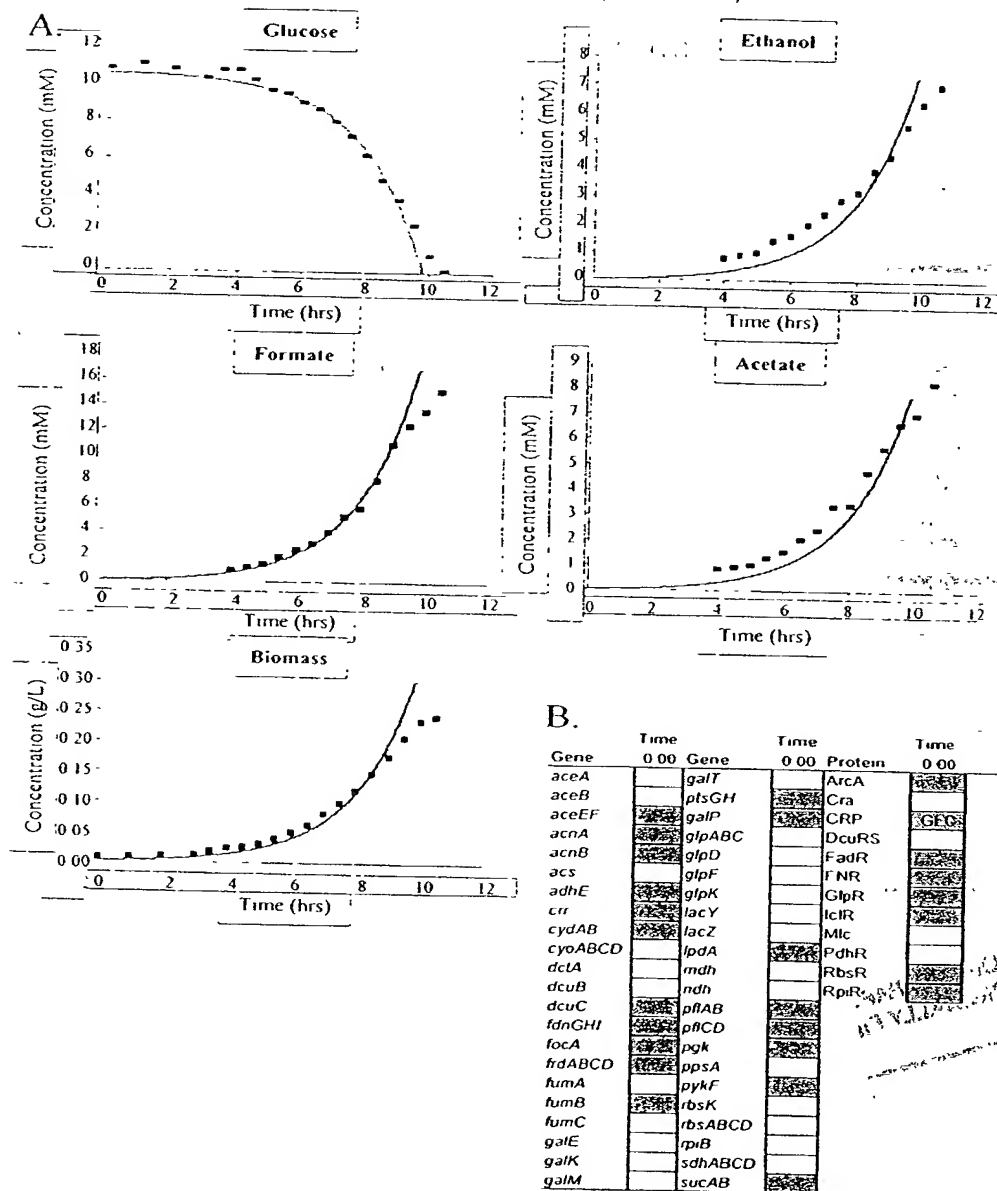
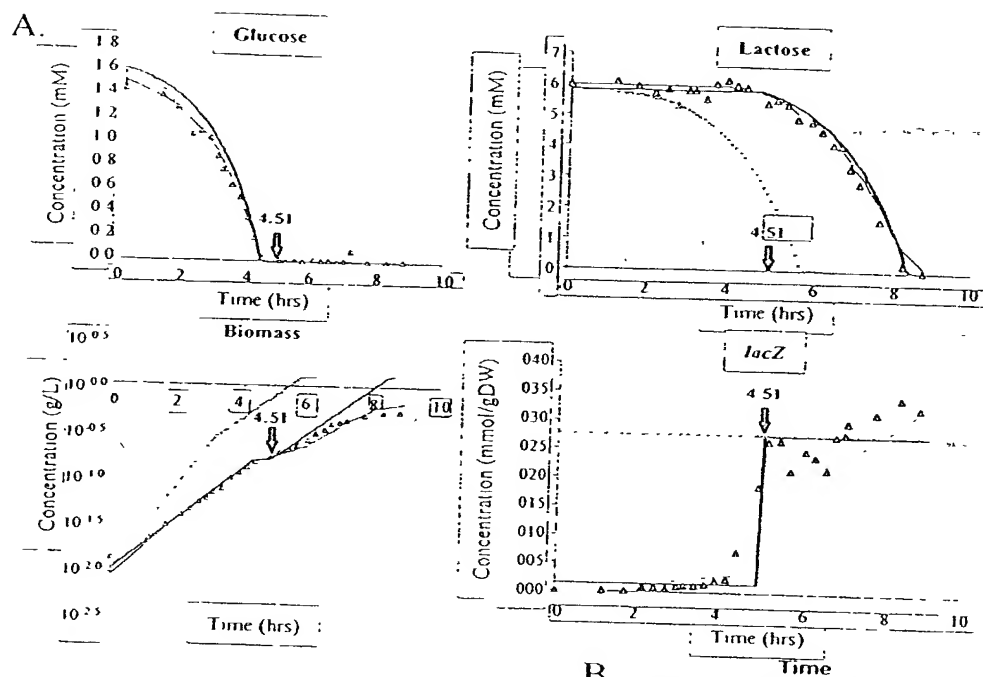


Figure 10



B.

| Gene        | 0 | 00 | 4 | 51 |
|-------------|---|----|---|----|
| <i>galE</i> |   |    |   |    |
| <i>galK</i> |   |    |   |    |
| <i>galM</i> |   |    |   |    |
| <i>galT</i> |   |    |   |    |
| <i>lacY</i> |   |    |   |    |
| <i>lacZ</i> |   |    |   |    |

| Protein | 0 | 00 | 4 | 35 |
|---------|---|----|---|----|
| CRP     |   |    |   |    |